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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BRYANT, DOUGLAS	
ART UNIT	PAPER NUMBER
4123	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/517,434	MCKEE, PAUL F.	
	Examiner	Art Unit	
	DOUGLAS BRYANT	4123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☒ Claim(s) *18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 December 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The references cited in the Search Report dated 10 December 2004 have been considered, but will not be listed on any patent resulting from this application because they were not provided on a separate list in compliance with 37 CFR 1.98(a)(1). In order to have the references printed on such resulting patent, a separate listing, preferably on a PTO/SB/08A and 08B form, must be filed within the set period for reply to this Office action.

Specification

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

Claim Objections

Claim 18 objected to because of the following informalities: Claim 18, line 8, unable to determine if "updating distributed computing network membership data accessible to said member node to indicate that said applicant node is a member node of said distributed computing network," is a major step or a sub step. If this is a major step, please add a semicolon on line seven between criteria and updating. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 22 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed invention in claim 22 is a loadable program lacking the necessary physical components (hardware) required for execution. Since claim 22 is clearly not a process or a composition of matter, it appears to fail to fall within a statutory category and thus non-statutory.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-10, 22, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Choquier et al.(Choquier) US Patent No. 5774668.

As per Claim 1, Choquier teaches the invention as claimed including a method of dividing a task amongst a plurality of nodes within a distributed computer, said

method comprising: receiving requirements data indicating desired properties of a task group of nodes and interconnections between them, which properties lead to said task group being suited to said task or tasks of a similar type (col 2, line 45; col 25, lines 46-47); calculating a task group topology in dependence upon said requirements data (Col 2, lines 48); and distributing said task amongst the plurality of nodes in accordance with the task group topology thus calculated (col 25, lines 47-49).

As per Claim 2, Choquier teaches a method according to claim 1 wherein said topology calculation comprises the step of comparing said requirements data with node capability data for a node available to join said task group (col 26, lines 11-14).

As per Claim 3, Choquier teaches a method according to claim 2 wherein said requirements data comprises one or more property value pairs (col 26, lines 15-21).

As per Claim 4, Choquier teaches a method according to claim 3 wherein said requirements data is arranged in accordance with a predefined data structure defined by requirements format data stored in said computer, said method further comprising the step of verifying that said requirements data is formatted in accordance with predefined data structure by comparing said requirements data to said requirements format data (col 25, lines 39-45).

As per Claim 5, Choquier teaches a method according to claim 1 wherein said node capability data comprises one or more property value pairs (col 26, lines 15-21).

As per Claim 6, Choquier teaches a method according to claim 5 wherein said node capability data is arranged in accordance with a predefined data structure defined by node capability format data stored in said computer (col 28, lines 35-36), said method further comprising the step of verifying that said node capability data is formatted in accordance with predefined data structure by comparing said node capability data to said node capability format data (col 28, lines 38-39).

As per Claim 7, Choquier teaches a method according to claim 1 further comprising the step of operating a node seeking to join said task group to generate node capability data and send said data to one or more nodes already included within said task group (col 25, lines 46-54).

As per Claim 8, Choquier teaches a method according to claim 1 wherein said task distribution involves a node forwarding a task to a node which neighbours it in said task group topology (col 25, lines 48-49; col 3, line 47-49).

As per Claim 9, Choquier teaches a method according to claim 1 wherein said requirements data comprises data relating to the amount of data storage or processing power available at said node (col 26, lines 9-10).

As per Claim 10, Choquier teaches a method according to claim 1 wherein said requirements data comprises data relating to the quality of communication between said node and one or more nodes already selected for said task group (col 28, lines 20-22).

As per Claim 22, Choquier teaches a computer program product loadable into the internal memory of a digital computer comprising: task group requirements data reception code executable to receive and store received task group requirements data (col 2, lines 45-47; col 9, 58-59); node capability profile data reception code executable to receive and store received node capability profile data (col 25, lines 42-44; col 25, line 46); comparison code executable to compare said node capability data and said task group requirements data to find whether the node represented by said node capability data meets said task group requirements (col 25, lines 59-61); task group topology update code executable to add an identifier of said represented node to a task group topology data structure on said comparison code indicating that said represented node meets said requirements (col 28, lines 41-43); task execution code executable to receive code from another node in said task group and to execute said code or forward said code to a node represented as a neighbor in said task group topology data structure (col 25, lines 47-49).

As per Claim 23, Choquier teaches a method of operating a network to create a logical network topology based on the physical topology of said network, said logical

network topology being suited to a task, said method comprising: identifying a member node as a member of said logical network (col 28, line 34-35); storing requirements data representing what is required of nodes in order for them to be suitable for said task (col 25, lines 42-44); storing candidate node capability data representing the capabilities of a candidate node in said physical network (col 26, lines 5-7); operating a candidate node in said network to compare its candidate node capability data with said requirements data (col 25, lines 59-61; responsive to said comparison indicating that said candidate node to meet said requirements, making said node a member of said logical network (col 25, lines 46-48).

Claims 11-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Rafatjoo et al. (Rafatjoo) WO 98/09402.

As Per Claim 11, Rafatjoo teaches a distributed computer apparatus comprising: a plurality of data processor nodes, each connected to at least one other of said data processor nodes via a communications link (pg 1, lines 4-5); each of said nodes having recorded therein: a) group membership policy data; b) a list of group members; c) processor readable code executable to update group membership data (pg 7 line 4), said code comprising: group membership request generation code executable to generate and send a group membership request including node profile data to another node indicated to be a member of said group (pg 7, lines 8-11); group membership

request handling code executable to receive a group membership request including node profile data, and decide whether said request is to be granted in dependence upon the group membership policy data stored at said node (pg 7 lines 6-7; pg 7, lines 12-15); group membership update code executable to update the list of group members stored at said node on deciding to grant a group membership request received from another node, and to send a response to the node sending said request indicating that said request is successful (pg 3, lines 5-8; pg 7, lines 16-17).

As per Claim 12, Rafatjoo teaches distributed computer apparatus according to claim 11, wherein each node further has recorded therein node profile data generation code executable to generate said node profile data (pg 3, lines 5-10).

As per Claim 13, Rafatjoo teaches a distributed computer apparatus according to claim 11, wherein each node further has recorded therein group membership policy data distribution code executable to distribute said policy data, said policy distribution code comprising: policy input code operable to receive policy data (pg 3, lines 14-15); policy storage code operable to store said received policy data at said node (pg 4, lines 26-29 & 31-37); and policy forwarding code operable forward said policy from said node to at least one other node in said distributed computer apparatus (pg 4, lines 13-14).

As per Claim 14, Rafatjoo teaches a distributed computer apparatus according to claim 11, wherein each node further has recorded therein policy format data (pg 5, lines

7-10); and policy data format verification code executable to check that said received policy data accords with said policy format data (pg 7, lines 12-15).

As per Claim 15, Rafatjoo teaches a distributed computer apparatus according to claim 11, wherein each node further has recorded therein profile format data (pg 7, lines 6-7); and profile data format verification code executable to check that said received node profile data accords with said profile format data (pg 7, lines 12-15).

As per Claim 16, Rafatjoo teaches a distributed computer apparatus according to claim 11, wherein each node further has recorded therein received program data execution code executable to receive program data from another of said nodes and to execute said program (pg 7, lines 6-11).

As per Claim 17, Rafatjoo teaches a distributed computer apparatus according to claim 16, wherein said plurality of processor nodes comprise computers executing different operating systems programs (pg 1, lines 32-37), and said received program execution code is further executable to provide a similar execution environment on nodes despite the differences in said operating system programs (col 2, lines 35-37; col 3 lines 1-2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

As per Claim 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choquier et al. (Choquier) US Patent No. 5774668, and in view of Rafatjoo et al. (Rafatjoo) WO 98/09402.

As per Claim 18, Choquier teaches on receiving, from an applicant node, profile data comprising one or more property value pairs indicating characteristics of the applicant node (col 25, line 46-47); determining whether said applicant profile data indicates that said applicant node meets said membership criteria(col 25, lines 62-64); responsive to said determination indicating that said applicant node meets said membership criteria, updating distributed computing network membership data accessible to said member node to indicate that said applicant node is a member node of said distributed computing network (col 26, lines 6-7). Choquier does not specifically discloses a method of operating a member node of a distributed computing network, said method comprising: accessing membership policy data comprising one or more property value pairs indicating one or more criteria for membership of said distributed computing network;

However, Rafatjoo teaches on policy definitions and how each condition corresponding to a specific group solves the problem of being able to monitor groups of computers (pg 2 lines 31-35; pg 2, line 8).

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of Rafatjoo into the method of Choquier to have membership policy data to monitor and manage a distributed system. The modification would have been obvious because one of the ordinary skills of the art would have a specific policy definition in place to get the best results according to the needs of the users on the distributed system.

As per Claim 19, Choquier and Rafatjoo teaches a method according to claim 18 above, Choquier teaches wherein said member node stores said distributed computing network membership data (col 25, lines 42-44).

As per Claim 20, Choquier and Rafatjoo teaches a method according to claim 19 above. Rafatjoo discloses a method wherein said member node stores said membership policy data (pg 4, lines 30-33).

As per Claim 21, Choquier and Rafatjoo teaches a method according to claim 20 above, Rafatjoo teaches a method of further comprising the steps of: updating said membership policy data (pg 3, lines 4-5); removing indications that one or more nodes are members of said distributed computing network from said distributed computing

network membership data (pg 7, lines 12-15); sending an indication to said one or more nodes requesting them to re-send said profile data (pg 7, lines 16-17).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas Bryant, whose telephone number is (571)-270-7707. The examiner can normally be reached on Monday-Thursday and alternate Friday from 8:30 am to 6:30 pm Est.

If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, David Robertson can beach reached on 571-272-4186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status if an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information about unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http:pair-direct.uspto.gov. Should you have any questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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